



GB 2292373A

# (12) UK Patent Application (19) GB (11) 2 292 373 (13) A

(43) Date of A Publication 21.02.1996

(21) Application No 9416612.1

(22) Date of Filing 17.08.1994

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(51) INT CL<sup>6</sup>  
B65D 39/12

(52) UK CL (Edition O )  
B8T THSB  
U1S S1310

(56) Documents Cited  
EP 0085874 A2

(58) Field of Search  
UK CL (Edition N ) B8T THSB THX TWA TWL  
INT CL<sup>6</sup> B65D 39/12  
Online :WPI

## (54) Child proof expandable stopper

(57) A stopper includes a part 3 which is caused to expand radially and diminish in axial thickness when a lever, which has a removable part 2 and is attached at pivot point 5 to a pin extending through the plug and ending in a head 4, is moved to lie horizontally such that part of the handle serves as a camming surface acting on the top surface of the plug and moves the plug downwardly relative to the head 4. The removable part of the lever may be kept on a key ring and may be usable with different sized stoppers, absence of lever part 2 preventing a child from removing the stopper from a bottle with which it is associated.

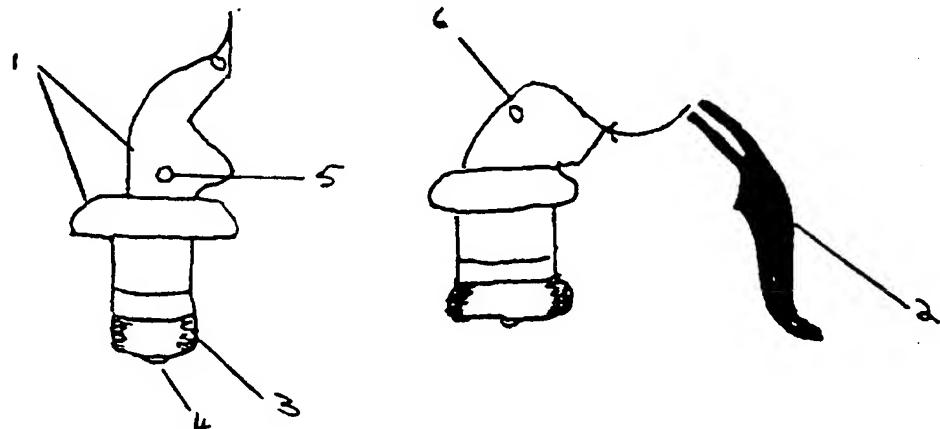


FIG 3

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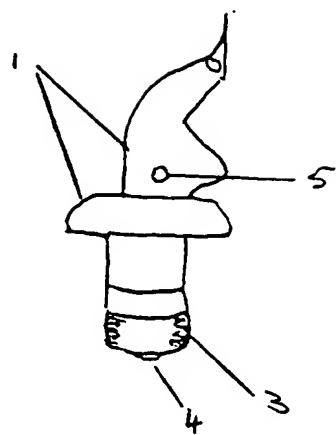


FIG .1

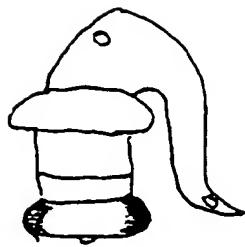


FIG .2

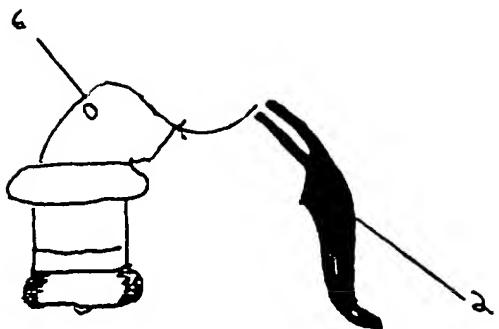


FIG .3

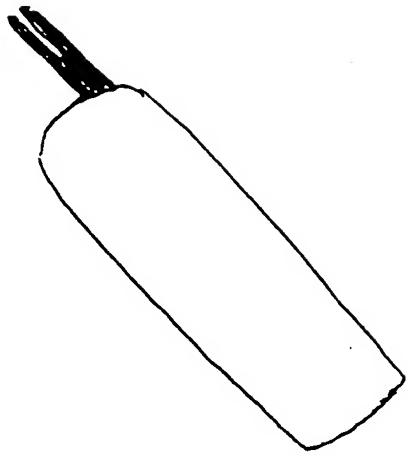


FIG .4

**2292373**

-1-

## **CHILD PROOF TOP**

This invention relates to child proof tops for bottles and other containers

The idea of a child proof top is that it cannot be opened unless a set action is done: eg-the top pushed down before rotation.

There are several child proof tops available but as a rule they are all openable by accident and are also difficult for the elderly to open

According to the present invention a secure top is provided by means of a variable thickness rubber stopper which when closed has the handle removed and cannot be opened till the handle is replaced.

The handle is kept on a keyring. A larger version of the handle would be available for the elderly.

A specific example of the invention will now be demonstrated with one example of a possible handle:

Figure 1-shows the top with handle in the open position before placing in the container/bottle

Figure 2-shows the top in the closed position with handle still in place

Figure 3-shows the top in the closed position with handle removed

Figure 4-shows an example of a handle for the elderly

Referring to the drawing the top consists of the main body 1 and a detachable handle 2. The handle attaches to the body for example by a narrow slit in the metal which slides onto the body. figure 3

In order to close the top the handle is pulled down so making the rubber zone 3 narrower and wider. The leverage is obtained by a pin going through the top attached to point 4+5.

The part of the handle left 6 means that the top doesnot accidentally open and does not allow a grip to open the top.

The handle is kept on a keyring and so one handle is only needed for several tops.

To open the top the handle is replaced and levered upwards.

**CLAIMS**

- 1 A child proof stopper which has an expandible zone which is expanded by leverage on a handle which is removed and is therefore locked until the handle is replaced
- 2 The stopper as claimed in one includes an expandible area of rubber, plastic,  
etc
- 3 The stopper as claimed in one and two has a small detatchable handle which  
goes onto a keyring
- 4 The stopper as claimed in any preceeding claim has the same key for all stopper  
sizes
- 5 the stopper as claimed in any preceeding claim is reusable



The  
Patent  
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- 4 -

Application No: GB 9416612.1  
Claims searched: 1-5

Examiner: Linda Harden  
Date of search: 17 October 1995

**Patents Act 1977**  
**Search Report under Section 17**

**Databases searched:**

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK CI (Ed.N): B8T ( TWA,TWL,THSB,THX)

Int Cl (Ed.6): B65D 39/12

Other: Online:WPI

**Documents considered to be relevant:**

Category	Identity of document and relevant passage	Relevant to claims
X	EP 0085874A2 (HEUBL) - see the figures	1-5

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.
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